

Model,” the BCM grossly mistates ILEC costs in a number of significant respects.<sup>181</sup> The results of SWBT’s analysis show that:

- (1) The BCM calculated loop investment per household is at least 50% different than actual company results for 34% of the LECs.
- (2) The BCM ARMIS-based annual cost calculation is at least 50% different than actual data for 29% of the LEC study areas.
- (3) The BCM Hatfield-based annual cost calculation is at least 50% different than actual data for 29% of the LEC study areas.
- (4) The BCM investment per household was different by at least 25% for 85% of SWBT’s 506 wire centers in Texas.

The BCM is not a reliable tool for costing ILEC services.

**D. Rates For Interconnection And Network Elements Should Be Set Using A “Zone Of Reasonableness.” (NPRM - II.B.2.)**

Rather than requiring ILEC rates for interconnection and unbundled elements to be based on either TSLRIC or LRIC, the Commission should instead allow carriers to determine those rates via negotiation. Where arbitration on rates becomes necessary, a rate should be presumed lawful if it falls within a “zone of reasonableness” between an established price floor and a price ceiling. In total, cost-based rates must sum to the level that allows for recovery of incremental, joint and common, embedded, and support costs until comprehensive regulatory reform is achieved. While the two cost measures on which the Commission has sought comment cannot serve as rates themselves, LRIC

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<sup>181</sup> See also SWBT’s Comments filed April 12, 1996 in CC Docket No. 96-45, pp. 14-16, which are incorporated herein by reference.

could serve as a rate floor. Current LEC access rates could serve as a rate ceiling. Rate ceilings are a feasible way to establish presumptively lawful rates for loops, transport and other unbundled elements, although no uniform methodology may be appropriate for all elements in all situations. It is important to note that rate ceilings are not established as absolute maximum rates, but rather as levels below which rates are presumptively lawful.<sup>182</sup>

**1. Current Access Rates Could Be Used As A Price Ceiling. (NPRM - II.B.2.)**

SBC supports the Commission's suggestion that current access rates themselves can serve as an appropriate ceiling for unbundled network element rates.<sup>183</sup> This would be accomplished by granting presumptive lawfulness to unbundled access rates priced such that the sum of the unbundled rates is less than or equal to bundled access prices, plus the additional costs incurred from unbundling. LECs could request rates above the ceiling with proper justification. In this manner, a competitively neutral balance could be maintained between bundled and unbundled prices. This balance can eliminate uneconomic arbitrage through "tariff shopping" and improper jurisdictional classification. In the NPRM, the Commission tentatively concludes that interexchange carriers that

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<sup>182</sup> There is some Commission precedent for this general concept. In CC Docket No. 89-79 (87-313), order released August 6, 1992, para. 11, the Commission concluded that if a LEC introduces a new or improved version of an existing service, and the new service is priced below the rate for the existing service, the new price is presumptively lawful.

<sup>183</sup> NPRM, para. 139.

obtain unbundled network elements and use them in part or in whole to provide interstate access may not be assessed Part 69 access charges in addition to the charges assessed for the network elements under Sections 251 and 252.<sup>184</sup> SBC believes that IXCs are not entitled to substitute unbundled network elements for access until the Commission supersedes the access charge system. SBC believes that the Commission has highlighted a significant problem and agrees that the Commission should take up access reform at the earliest possible time. Current access charges themselves should serve as the basis for unbundled network element rates until access reform is completed to eliminate the incentive for IXCs to engage in arbitrage. Once access reform is completed and removal of implicit support and rate rebalancing is accomplished, rates can be adjusted to reflect the removal of implicit support. In certain cases, bundled access rates may not correspond directly with the requested unbundled elements. In these cases, the appropriate access rates would be modified to reflect the characteristics of the unbundled service offering. In this manner, consistency with existing access rates would be maintained even though the unbundled service offering was “customized” to meet the needs of the purchaser.

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<sup>184</sup> NPRM, para. 165.

## **2. LRIC Should Be Used As A Price Floor. (NPRM - II.B.2.)**

Identifying an appropriate price floor is meaningful only for readily detecting anticompetitive pricing behavior. Beyond that, incremental costs should have no significant role in establishing retail or wholesale prices.

While both TSLRIC and LRIC recognize that all service-specific costs are appropriately recovered by the total revenues obtained from the provision of a service, LRIC maintains that the non-volume sensitive costs directly attributable to producing a service cannot be spread simply and arbitrarily across the number of units produced. The LRIC framework acknowledges nonrecurring charges, a combination of flat rate recurring charges and usage sensitive prices, different prices across customer groups, varying prices over time, or some other price structure as appropriate methods for the recovery of service-specific non-volume-sensitive costs.

In contrast, TSLRIC would establish a single, uniform price for each unit of output. Since non-volume sensitive costs cannot be unambiguously attributed to each unit produced, but rather are identified as required to supply the entire volume of a service, such costs are not a legitimate component of a valid per-unit price floor. Only those costs directly attributable to each unit of output (i.e., variable costs per unit) should comprise the per-unit price floor. Non-volume sensitive costs should be treated consistently with all the rest of the firm's joint, common, and other costs in identifying a price floor for each unit of a specific service produced.

Since TSLRIC implies that service-specific non-volume sensitive costs are appropriately recovered only by establishing a uniform price for every unit of a good or service supplied, TSLRIC is an inappropriate measure of a meaningful price floor. LRIC, not TSLRIC, constitutes the appropriate floor below which a firm's price per-unit of output should not remain indefinitely.

### **3. SBC's Proposal Is Consistent With The Act. (NPRM - II.B.2.)**

Section 252(d)(1) dictates that rates "shall be based on cost (determined without reference to a rate-of-return or other rate-based proceeding) of providing the interconnection or network element (whichever is applicable), and nondiscriminatory, and may include a reasonable profit."<sup>185</sup> SBC agrees with the Commission's rate ceiling proposal to use current access rates. That approach would provide a method for establishing reasonable rates that is not tied to a rate-of-return or rate-based proceeding, and would allow parties to negotiate meaningfully. Further, the approach utilizes rates that have already been found to be lawful, and nondiscriminatory, and that have been in effect since the inception of price cap regulation. The approach is also consistent with the Act's provision allowing for the possibility of a profit. Any lesser rate standard, such as a rate prescribed equal to LRIC or some other "incomplete" cost standard, would fail to meet the Act's objectives.

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<sup>185</sup> 47 U.S.C. Section 252(d)(1).

**E. Negotiations Based Upon Measurable Market Demand Should Dictate Specific Unbundling. (NPRM - II.B.2.)**

As noted earlier, requiring any given network element to be unbundled solely on the basis of a party's contention that it is "technically feasible" would be poor public policy. The Act gives the Commission the authority to determine what other factors are properly taken into account in making such determinations. Section 251(d)(2) provides that the two specific factors enumerated therein (whether access to proprietary elements is necessary and whether the requesting carrier needs the element to provide the services it seeks to offer) are to be considered "at a minimum".<sup>186</sup> One additional factor that clearly should be taken into account in all such analyses is the demonstrable market demand present for the requested unbundled network element.

The ILECs will usually be able to determine the approximate costs of any specific unbundling request, but the other necessary side of the equation -- demand -- must be provided by the party requesting the unbundled network element(s). Unless the Commission can develop an accurate sense of costs versus the projected market demand, it will be unable to determine whether granting a given request for unbundling will result in a useful, efficient expenditure of industry resources, and thus will be unable to make the required public interest determination. It is only logical to place the burden of producing evidence of market demand upon the party seeking the unbundling, since such

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<sup>186</sup> 47 U.S.C. Sections 251(d)(2)(A) and (B) (emphasis added).

parties are in the best position to know how useful the requested network element is likely to be to those who would seek to utilize it in constructing their own competing services.

Finally, it bears repeating that all unbundling requests in the first instance are best handled, and were plainly intended by Congress to be handled, in the legislated negotiation process. The Commission in this proceeding should not attempt to pre-judge any specific unbundling requests beyond those identified in Section VI.B. above.

## **VII. LIMITED NATIONAL ARBITRATION GUIDELINES ARE APPROPRIATE.**

The Commission seeks comment in several areas regarding the value of adopting national standards to govern certain aspects of state arbitrations conducted under the Act.<sup>187</sup> This is an instance where federal guidelines would be useful to the industry and should be adopted, as outlined below, given the lack of individual state development in this area.

### **A. Several Guidelines Are Already Provided In The Act. (NPRM - III.A.)**

Section 252(b)(1) of the Act provides:

During the period from the 135th to the 160th day (inclusive) after the date on which an incumbent local exchange carrier receives a request for negotiation under this section, the carrier or any other party to the negotiation may petition a State commission to arbitrate any open issues.<sup>188</sup>

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<sup>187</sup> NPRM, paras. 264-72.

<sup>188</sup> 47 U.S.C. Section 252(b)(1) (emphasis added).

By establishing this time frame for requesting negotiations of the type specifically required under Section 252 of the Act, Congress intended to create jurisdictional deadlines. Also, by definition, no such negotiations could possibly have occurred prior to enactment (February 8, 1996), because they could not possibly have been conducted "under this section." The Commission should so note in this proceeding.

As another example, the Act specifies very narrow grounds for disapproving interconnection agreements that have been subjected to arbitration. Such agreements may "only" be rejected upon a finding that they do not meet the Section 251 requirements (including the FCC's Section 251 implementation regulations), or if they fail to meet the various pricing standards expressly set forth within Section 252(d).<sup>189</sup> No other ground for rejection is permitted by Congress and the Commission should also expressly acknowledge that fact.

**B. The Proper Boundaries Of Arbitration In General (NPRM - III.A.)**

The Act defines the intended boundaries of state arbitration proceedings under Section 252 in several important respects, each of which should be expressly noted by the Commission so that the parties and state commissions have clear direction as they enter this new type of regulatory process.

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<sup>189</sup> 47 U.S.C. Section 252(e)(2)(B) (emphasis added).



**1. Decisions Confined To Areas Submitted By The Parties (NPRM - III.A.)**

Section 252(b)(4)(A) mandates that the state commission "shall limit its consideration of any petition under paragraph (1) (and any response thereto) to the issues set forth in the petition and in the response. . . ."<sup>190</sup> This language means that Congress did not intend for regulatory commissions to delve into areas where the parties have already reached agreement rather, they are intended to adhere to only the precise issues presented to them by the parties for resolution as described in the opening petition and in the other party's formal response. Although other matters the parties have agreed upon may be relevant to the regulator's inquiries in seeking the most equitable resolution of the disputed issue(s), Congress did not intend for regulators to affect issues already resolved by the parties prior to arbitration. Moreover, the law is settled that any action by the arbitrator which exceeds the bounds of the parties' submission or which determines a matter not submitted will be void.<sup>191</sup>

**2. The Advantages Of "Baseball-Type" Arbitration (NPRM - III.A.)**

The NPRM asks about the relative benefits of "final offer" arbitration versus "open ended" arbitration, explaining that the former is where each party submits its last and best offer and the arbitrator must choose one or the other, and that the latter is the opposite,

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<sup>190</sup> 47 U.S.C. Section 252(b)(4)(A) (emphasis added).

<sup>191</sup> Gulf Oil Corp. v. Guidry, 327 S.W.2d 406 (Tx. 1959); Wren v. Sletten Constr. Co., 654 F.2d 529, 533 (9th C r. 1981).

i.e., where the arbitrator is not confined to adopting only one or the other of the two parties' specific final offers <sup>192</sup> The Commission should adopt as a national guideline the "final offer" form of arbitration (sometimes referred to as "baseball-type" arbitration).<sup>193</sup>

Open-ended arbitration could run afoul of the clear Congressional intent, noted above, that regulators not stray from the specific area(s) placed before them by the parties for decision. For example, under "final offer" arbitration, if one party offered price "X" for terminating traffic while the other demanded price "Y", the regulator could not reasonably decide that the parties must utilize a mere bill and keep arrangement. That would be a clear-cut example of straying from the issue framed by the parties for resolution.

Further, as noted in the NPRM, "final offer" arbitration would likely deter parties from taking unreasonable positions to arbitration, knowing that the arbitrator's decision must come from one or the other of the parties' positions.<sup>194</sup> This could greatly facilitate the negotiation process in general.

Finally, the term "open ended" is so general and undefined that it may connote certain concepts never intended by Congress or by the Commission. Such lack of

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<sup>192</sup> NPRM, para. 268.

<sup>193</sup> This is an area in which Congress provides no indication of an intended preference, and thus is properly addressed by the FCC in its role of setting national guidelines where helpful to the industry.

<sup>194</sup> NPRM, para. 268.

definition would create uncertainty for the parties in trying to make a determination about whether to seek arbitration or strive harder to reach a negotiated result.

### **3. Non-Binding Nature Of Arbitration Decisions Under The Act (NPRM - III.A.)**

A critical point of clarification relates to the non-binding nature of arbitration decisions under the Act. The NPRM alludes to this area where it refers to an arbitrator's decision regarding "which of the two proposals becomes binding."<sup>195</sup> Congress did not intend for parties to "be bound" by arbitration decisions under the Act in the sense that they are legally obligated to enter into an agreement after receipt of the arbitrator's decision. Clearly, if they decide to enter into an agreement, then they must incorporate the arbitrator's decision (unless of course they decide to re-negotiate the entire agreement), but it is equally clear that they are not legally obligated to enter into any agreement at all after an arbitration decision if either party at that point does not wish to do so.

Congress's intent is apparent from the fact that parties must subsequently submit signed agreements to state commissions for separate review after an arbitration decision.<sup>196</sup> Congress could have provided that, after the state's arbitration decision, the

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<sup>195</sup> Id. (emphasis added).

<sup>196</sup> See 47 U.S.C. Section 252(e)(4), providing that "30 days after submission by the parties of an agreement adopted by arbitration under subsection (b), the agreement shall be deemed approved" (emphasis added). Clearly, both parties must agree to submit such  
(continued...)

state then automatically reviews the remainder of the agreement for overall approval under Section 252(e), but it did not do so. Rather, it provided for a second, separate submission to the state commission of the parties' agreement in its entirety, with a second review period. This indicates Congressional intent that arbitration decisions not compel parties to enter into an agreement if one or the other still objects after an arbitration case.

In any event, the law is clear that in the case of compulsory arbitration, as in the Act, unless the parties agree in advance to be legally bound by the result they cannot be bound, and are entitled to a de novo court determination of the issues.<sup>197</sup> The Act does not supplant the law of arbitration in the United States, which is well-developed and widely understood. There is no need for the FCC to develop rules that would merely duplicate that body of law.

#### **4. Importance Of A Bilateral Approach (NPRM - III.A.)**

Congress desires the negotiation and arbitration processes to work as swiftly as possible. To meet that important legislative goal, arbitration cases should be bilateral only. Otherwise, there is great potential for numerous non-party entities to seek to be fully involved in the arbitration proceeding, and to bog it down with various procedural

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(...continued)

agreements for overall state review, not merely the one which may have obtained the favorable arbitration result.

<sup>197</sup> General Practice Commentary, 28 U.S.C.A. Section 651, p. 407; Smith Case, 381 pa. 223, 112 A.2d 625, 629 (1955); Nutt v. U.S., 112 U.S. 650, 655 (1988).

motions, substantive pleadings, or other delaying tactics designed only to keep the parties from obtaining final interconnection agreements with which they happen to disagree.

Furthermore, the Act in no way implies or even hints that the intention was for there to be intervention or public participation in arbitration proceedings conducted pursuant thereto. Indeed, the indications are to the contrary. For instance, Section 252(h) does not require a state to make public any matter pertaining to an arbitration case until such time as an agreement between two parties has been finalized and approved by the state commission.<sup>198</sup> Moreover, nowhere does the Act allow for specific filings of any type other than the original petition for arbitration filed by one party, and the formal response filed by the other.<sup>199</sup>

### **C. Approval Process After FCC Arbitration (NPRM - III.A. )**

The NPRM seeks comment on what procedures should govern FCC arbitration cases in the event that a state declines to conduct such a case and the FCC must preempt and assume that responsibility.<sup>200</sup> The FCC in such cases should conduct the proceeding in exactly the same way that the state in question would have had to conduct it had the state decided to do so, including the application of any unique state laws/regulations. Any other approach would hold out the possibility of inequity or confusion for the involved

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<sup>198</sup> 47 U.S.C. Section 252(h).

<sup>199</sup> 47 U.S.C. Sections 252(b)(2) and (3).

<sup>200</sup> NPRM, para. 266, referring to 47 U.S.C. Section 252(e)(5).

parties because they would have gone through the negotiations under the presumption that the case would be arbitrated pursuant to that specific state's laws and regulations. For the FCC to do otherwise could undermine the parties' efforts on all those matters upon which they had agreed prior to seeking arbitration.


## **VIII. CONCLUSION**

Congress expended a great deal of time and effort in crafting an extremely detailed piece of telecommunications legislation in the 1996 Act, precisely so that implementation would be relatively straightforward, thereby expediting the desired result of increased competition via market-driven, voluntary carrier negotiations. If the Commission decides to pre-determine the outcome of such negotiations by adopting the exceedingly detailed regulations proposed in the NPRM, the entire negotiation process will be undermined because parties will merely stand behind their interpretations of FCC rulings and make demands instead of negotiating in good faith. The Commission must decline the invitation of others to overly complicate the process with endless layers of further

regulations that would only serve to meet such parties' ulterior motive of interjecting delay into the process of BOC in-region interLATA relief. Instead, the Commission should adhere to the clear intent of Congress in each respect pointed out herein.

Respectfully submitted,

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May 16, 1996

**SBC COMMUNICATIONS INC.**  
**May 16, 1996**  
**COMMENTS IN CC DOCKET NO. 96-98**

APPENDIX A

**Efficient Component Pricing Rule**

**A. The Commission Should Not Preclude The Efficient Component-Pricing Rule.**

The FCC has tentatively concluded that "states be precluded from using [the ECPR] to set prices for interconnection and access to unbundled elements."<sup>1</sup> SBC is in *strong opposition* to this tentative conclusion, and argues that the ECPR is, in fact, the very interconnection pricing rule the Commission should actively support. The well-known efficient-component pricing rule (ECPR) states that the price of access to upstream productive inputs should be set equal to the direct incremental cost of access plus the opportunity cost to the upstream monopolist of providing access (*i.e.*, the profits foregone by selling access in lieu of selling the downstream or retail service). SBC's arguments are as follows.

**1. The Act Applies the ECPR In Section 252(d)(3) --- Prices Of Resold Services.**

There is ample precedent for the ECPR in the Act itself. The Act applies the ECPR in its recommendation for setting the prices of resold services. Section 252(d)(3) of the Act states: "For the purposes of section 251(c)(4), a State commission shall determine wholesale rates on the basis of retail rates charged to subscribers for the telecommunications service requested, excluding the portion thereof attributable to any marketing, billing, collection, and other costs that will be avoided by the local exchange carrier." This is a *direct application* of the efficient component-pricing rule. The fact that this "avoided cost" rule is equivalent to the ECPR is shown on page 6 of this Appendix. SBC argues it is inconsistent to apply the ECPR in one section of the Act, but to preclude its use in setting prices for interconnection and access to

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<sup>1</sup> NPRM, para. 147.



unbundled elements.

**2. The ECPR Is Equivalent to Ramsey Pricing Under Plausible Circumstances.**

The NPRM advocates the use of Ramsey pricing,<sup>2</sup> yet the ECPR is equivalent to Ramsey pricing under some very plausible assumptions.<sup>3</sup> Thus, the ECPR could easily be no different from a method of pricing the Commission itself has tacitly advocated elsewhere in the NPRM.

**3. The Commission Has Placed Undue Weight On Criticisms Of The ECPR.**

The Commission states in the NPRM that the desirable properties of the ECPR hold only in special circumstances. However, SBC believes these "special circumstances" are the basis of the Commission's beliefs about the telecommunications industry. For example, if the Commission believes that the most efficient industry structure in a retail market is competition (i.e., many suppliers that all have scale economies that exhaust at low levels of output), then the ECPR is the correct interconnection pricing rule. Even if these "special circumstances" do not hold, the more appropriate alternative interconnection pricing rule may result in prices virtually the same as the ECPR would produce, or *higher*.<sup>4</sup> The Commission has mistakenly assumed that when the ECPR is not the "correct" pricing rule, it also results in prices that are too high. This is not correct, and SBC cites the same source the Commission has used to support its erroneous assumption.<sup>5</sup>

**4. The Commission Has Incorrectly Stated Criticisms Of The ECPR.**

The Commission states: "Under the ECPR, competitive entry does not drive prices

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<sup>2</sup> NPRM, para. 130

<sup>3</sup> Alexander C. Larson, *The Efficient Component-Pricing Rule as a Special Case of Ramsey Pricing*, (1996) (unpublished manuscript -- available upon request).

<sup>4</sup> Jean-Jacques Laffont & Jean Tirole, *Access Pricing and Competition*, 38 EUR. ECON. REV. 1673 (1994).

<sup>5</sup> *Id.*

toward competitive levels, because it permits the incumbent carrier to recover its full opportunity costs, including any monopoly profits. In general, the ECPR framework precludes the opportunity to obtain the advantages of a dynamically competitive marketplace."<sup>6</sup> There is no support for this claim in the economics literature, and recent research indicates that it is in error.<sup>7</sup> Thus, the Commission is basing an important preclusion of efficient pricing on a basic misunderstanding about the ECPR. The Commission seems to labor under the erroneous assumption that interconnection prices via the ECPR (or any other rule) are set *once* and never revised; however, if competition in retail markets truly can make consumers better off, economic analysis indicates that interconnection rates may need to be revised downward. And regardless of the actual level of interconnection prices that result from the ECPR, it is always true that firms more efficient than a LEC charging ECPR rates have a competitive edge over that LEC.

**5. Efficient Interconnection Pricing Requires Prices To Exceed Incremental Cost.**

The economics literature indicates that efficient interconnection pricing should be performed using prices that exceed incremental cost.<sup>8</sup> No paper exists in the economics literature which derives efficient prices of interconnection for vertically integrated firms equaling marginal cost or incremental cost. The ECPR is merely a pricing rule that indicates how the regulatory agency should allow interconnection prices to exceed incremental cost. Furthermore, it is clear that the pricing of interconnection at LRIC or TSLRIC is not compensatory.

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<sup>6</sup> NPRM, para. 147.

<sup>7</sup> Alexander C. Larson, *Access and Interconnection Pricing: A Derivation of the Efficient Component-Pricing Rule* (1995) (unpublished manuscript available upon request) at 13 ("This alternate derivation of the ECPR makes it clear that the ECPR can emerge as the optimal access pricing rule if regulators seek to encourage price competition in the downstream market. Indeed, it is the end result of atomistic competition in the downstream market.")

<sup>8</sup> See, e.g., JEAN-JACQUES LAFFONT & JEAN TIROLE, A THEORY OF INCENTIVES IN PROCUREMENT AND REGULATION 258 (1993) ("... the price of the 'access good' must exceed its marginal cost.")

**6. The ECPR Does Not Constitute A Barrier To Entry.**

In para. 148 of the NPRM, the Commission states that it "seek[s] comment on whether [the ECPR], if used by a state, would constitute a barrier to entry as under Section 253 of the 1996 Act." Section 253 of the Act does not explicitly define the term "barrier to entry." However, the objectives of the Act will not be met unless the working definition of the term seeks to determine if: (1) existing firms (such as ILECs) can maintain retail prices at unreasonable levels while deterring entry; and (2) whether there is a policy that could "remove" the barrier, and in so doing, improve the efficiency of that retail market through improved competition by efficient entrants. In other words, a true entry barrier exists only if efficient entrants to a market are precluded from entry, despite their efficiency, and the competitive process is harmed as a result.

Given this discussion of entry barriers, SBC argues that it is clear the ECPR is not an entry barrier. Perhaps the best explanation of why this is so comes from Baumol and Sidak, the architects of the ECPR:

An entrant may have to replicate some of the incumbent's activities or facilities, and the costs of such duplication can render an entrant unprofitable. But if this is the case under [the ECPR], then the requisite replication of costs correspondingly renders the entry inefficient and, ultimately, harmful to consumers and to society. This is exactly what occurs in an ideally competitive or contestable market . . . . Input pricing that discourages inefficient entry cannot be said to constitute an undue competitive advantage, any more than the efficient workings of competitive markets can be labeled anticompetitive, even if they lead to the demise of less efficient firms.<sup>9</sup>

One property of the ECPR is that, if an entrant is more efficient than an ILEC, then it automatically has a competitive edge over that ILEC, even if the ILEC is charging the ECPR as an interconnection price. This is because under the ECPR, equally efficient firms (both ILEC and new entrants) face the same retail price floors, and if entrants have lower costs than the ILEC then under the ECPR they have lower retail price floors than the ILEC. In other words, the ECPR is equivalent

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<sup>9</sup> William J. Baumol & J. Gregory Sidak, *The Pricing of Inputs Sold to Competitors*, 11 YALE J. ON REG. 171, 201 (1994).

to the efficient imputation rule for pricing of retail services.<sup>10</sup> It is not an entry barrier because the ECPR does not deter the entry of firms more efficient than the ILECs. According to Baumol and Sidak, "When access, priced by the [ECPR], is used by either an ILEC or an IXC to provide the final product to consumers, it will still be possible for one of the suppliers to undercut the final-product price of the other, but only if that supplier is the more efficient supplier."<sup>11</sup>

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<sup>10</sup> *In re Application of Southwestern Bell Telephone Company for Expanded Interconnection for Special Access Services and Switched Transport Services and Unbundling of Special Access DS1 and DS3 Services*: Hearings on Docket No. 12879 Before the Pub. Serv. Comm'n of Tex., at Schedule 2, (Jun. 17, 1995) (per filed direct testimony of Southwestern Bell Telephone Company witness Alexander C. Larson).

<sup>11</sup> William J. Baumol & J. Gregory Sidak, *The Pricing of Inputs Sold to Competitors*, 11 YALE J. ON REG. 171, 198 (1994).

### The Efficient Component-Pricing Rule (ECPR) Is Equivalent to the Avoided Cost Rule

This chart shows that the ECPR is equivalent to the avoided cost rule for the wholesale pricing of resold services. Assume here that the retail service results from combining a wholesale input with a non-wholesale input. To see why the ECPR is equivalent to the avoided cost rule, start with the ECPR:

$$P_{\text{wholesale}} = IC_{\text{wholesale}} + CONTRIBUTION_{\text{retail}} \quad (1)$$

Note that  $IC_{\text{retail}}$  can be rewritten:

$$IC_{\text{retail}} = IC_{\text{wholesale}} + IC_{\text{non-wholesale}} \quad (2)$$

and  $CONTRIB_{\text{retail}}$  can be rewritten as follows:

$$CONTRIB_{\text{retail}} = P_{\text{retail}} - IC_{\text{retail}} \quad (3)$$

Substituting (2) into (3) yields

$$CONTRIB_{\text{retail}} = P_{\text{retail}} - (IC_{\text{wholesale}} + IC_{\text{non-wholesale}}) \quad (4)$$

Substituting (4) into (1) results in:

$$P_{\text{wholesale}} = IC_{\text{wholesale}} + P_{\text{retail}} - (IC_{\text{wholesale}} + IC_{\text{non-wholesale}}) \quad (5)$$

which when simplified yields:

$$P_{\text{wholesale}} = P_{\text{retail}} - IC_{\text{non-wholesale}} \quad (6)$$

which is the avoided cost rule for the pricing of wholesale services.

Thus, the ECPR (or Baumol-Sidak rule) and the avoided cost rule are mathematically equivalent.

## ANALYSIS AND COMPARISON OF BENCHMARK COST MODEL

This analysis was performed to quantify the effects of utilizing the Benchmark Cost Model (BCM)<sup>1</sup> on individual study areas (each company's operating area in a state is considered a study area). Universal Service Fund (USF) data from the October 1995 submission of actual 1993<sup>2</sup> is used to compare to the output of the BCM. The BCM was rerun to eliminate the switching component of the data in order to provide a comparable set of data. The switching component was eliminated by "zeroing out" the switching variables for the "Per line switch cost" and the "Fixed Cost per switch" in the output worksheets of the BCM. The model was recalculated and the output extracted and summarized using the company name in the BCM. The company name was used to cross reference the BCM data to the corresponding USF data. Although in the majority of cases corresponding data was identified, there were some instances where there was data in either the USF or BCM data and not in the other. These differences are explained later herein.

There are a number of basic differences in the underlying data that should be identified. These are:

- ◆ The USF data includes both residence and business lines. The BCM uses only the number of households from the Census Bureau data. For this reason, comparisons were made between the USF information per loop and the BCM information per household.
- ◆ The USF data is based on the average for the entire study area. The BCM is based on computations at the census block group level and summed up to the wire center identified as being the closest and then summed to the company owning the wire center.
- ◆ The USF data is based on actual data from the individual company's records and books. The BCM data is based on a combination of Census data, material cost, architecture, technology, and other model assumptions regarding impact of terrain and placement costs.

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<sup>1</sup> The Benchmark Cost Model was developed by MCI, Sprint/United Management Co., NYNEX, and US West, Inc., Benchmark Costing Model: A Joint Submission, Copyright 1995 CC Docket No. 80-286 (Dec. 1, 1995).

<sup>2</sup> The 1993 data used here was originally submitted in October of 1994. The October, 1995 submission included this revision of 1993 data. This data includes both "cost" and "average schedule" companies. "Cost" Companies are indicated "C" and average Schedule companies are indicated by an "A" in the Attachments. Because the average schedule companies only provide a limited amount of data, some of the comparisons may not be meaningful for these companies.

## **NUMBER OF STUDY AREAS IN ANALYSIS**

There was a total of 1511 study areas included in the analysis. Since the BCM associated each census block group (CBG) with the closest wire center, some CBGs were associated with wire centers and study areas in neighboring states. Two examples will suffice. The Texas USF data included Border to Border communications while the BCM did not assign any costs to that company. The BCM assigned the estimated costs for two CBGs to a wire center in Texas operated by Southwest Arkansas Telephone Coop Inc., which is not a separate study area in Texas in the USF data, but is included as part of the same companies operations in Arkansas. The major types of differences are identified in the table below.

	JSF Data	IN BCM Not in USF	BCM Data	IN USF Not in BCM	TOTAL Analysis
	a	b	c	d	e
"Cost" Study Areas	795	na	763	32	795
"Average Schedule" Study Areas	616	na	589	27	616
Other Study Areas	0	100	100	0	100
Total Study Areas	411	100	1452	59	1511

Differences may also be due to acquisitions/sales of companies/exchanges or it may be due to mapping inconsistencies.

## **DESCRIPTION OF COMPARISONS**

### **ANALYSIS 1**

This Analysis provides a comparison of the average USF loop investment per loop to the BCM average loop investment per household by company. For the BCM the investment for each CBG was summarized by company and divided by the total number of households. This comparison shows that there are significant differences for any individual company. Even at a state level, the differences range from the BCM data being 49.6% higher to 68.9% lower than the actual USF results.

## **ANALYSIS 2**

Analysis 2 is a comparison of the average USF cost per loop to the BCM average cost per household on a company-by-company basis. The USF data is taken from the October 1995 submission of 1993 data. The BCM loop cost for each CBG was summarized by the company identifier and divided by the total number of households to determine an average BCM cost per household. Summaries were prepared for each state<sup>3</sup> and the individual state averages combined. Charts show the number of companies that have differences in cost in various bands. For example, for 336 companies (22% of the total companies) the BCM average cost per household is between 50% and 100% greater than the USF average cost per loop.

## **ANALYSIS 3**

Analysis 3 is a company-by-company comparison of the USF Annual Payment to the amount of support calculated using the BCM at two different scenarios which reflect the highest and lowest total amounts from the BCM. The first scenario, which produces the highest amount of support of the three benchmarks (\$20, \$30, and \$40) and two annual cost factors (ARMIS is the highest at 31.6765% and MCI/Hatfield is the lowest at 22.97%), is based on a \$20 benchmark and the ARMIS-based annual cost factor. The second scenario produces the lowest amount of support and is based on a \$40 benchmark and the MCI/Hatfield annual cost factor. Summaries show that the USF Annual Payment, for the studied companies, is approximately \$686 Million. The support requirement grows to \$4,733 Million in the BCM using a \$20 benchmark and the ARMIS annual cost factor, while with a \$40 benchmark and the MCI/Hatfield annual cost factor the support is \$848 Million. It should also be noted that the distribution of the support amount varies significantly from scenario to scenario. While the USF provides only 9.1% of the total to Tier 1 Local Exchange Carriers (LECs) (the RBOCs), the support to Tier 1 LECs increases to 41% of the total in Scenario 2 and is 37% in Scenario 3.

## **ANALYSIS 4**

Analysis 4 compared data from SWBT Texas wire centers to summarized results from the BCM. The SWBT actual data<sup>4</sup> reflects investment for the loop only and the BCM data was rerun to exclude switching investment. This comparison shows that the theoretical BCM investment was at least 25% different than the actual investment in 85% of the wire centers.

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<sup>3</sup> Information for each study area within a state was included in and Ex Parte by SWBT in CC Docket No. 80-286 dated 2/14/96, Revised 2/19/96.

<sup>4</sup> Information on SWBT's original study was included in its Comments to the NPRM/NOI in CC Docket No. 80-286, dated October 10, 1995, Appendix 7 and Appendix 8



## COMPARISON OF USF LOOP INVESTMENT PER LOOP TO BCM LOOP INVESTMENT PER HOUSEHOLD

BCM results were summarized to provide average loop investment per household for each study area. For comparability with USF data switch costs were excluded.

Universal Service Fund (USF) data from 1993 (data submission was made in September, 1995) was summarized to show average loop investment per loop for each study area.

Difference between BCM average investment per household and USF average investment per loop was calculated.

Difference was compared to the USF average investment per loop.

Average schedule study areas and those study areas not having both BCM investment and USF investment were excluded from comparison. Comparison was made for 761 study areas.

### EXAMPLE - SWBT - TEXAS:

BCM	=	\$506.14/HH	
USF	=	\$890.56/Loop	
DIFFERENCE	=	-\$384.42	
% DIFFERENCE	=	(-\$384.42/\$890.56) = -43%	

### SUMMARY OF RESULTS:

	<u>STUDY AREAS</u>	<u>% STUDY AREAS</u>
-100% < BCM DIFF. <= -50%	24	3%
-50% < BCM DIFF. <= -25%	108	14%
-25% < BCM DIFF. <= 0%	170	22%
0% < BCM DIFF. <= 25%	127	17%
25% < BCM DIFF. <= 50%	95	12%
50% < BCM DIFF. <= 100%	130	17%
100% < BCM DIFF.	107	14%

### IMPLICATIONS:

- ◆ RESULTS VARY SIGNIFICANTLY FROM COMPANY TO COMPANY